

AD 10. (AMENDED) The article of claim 1 wherein the different organic polyol (b) is present and is selected from polyester polyols; polyether polyols, amide-containing polyols; polyacrylic polyols; epoxy polyols; polyhydric polyvinyl alcohols; urethane polyols and mixtures thereof.

AB 18. (AMENDED) The article of claim 1 wherein the catalyst is present and is selected from 1,4-diazabicyclo[2.2.2]octane, dibutyl tin acetate, dibutyl tin dilaurate or mixtures thereof.

REMARKS

The amendments to claims 7, 10 and 18 are not made in response to the prior art and are made for the purpose of clarification only. The scope of these claims has not been narrowed and no subject matter has been surrendered. Although Applicants believe that the claims as originally written were clear, the modifications suggested by the Examiner were incorporated in order to further prosecution.

Claim 7 was amended by including "is" after "polyol" and "and" after "is" in line 2. Claims 10 and 18 were amended by including "present and is" after "is". Applicants would like to thank the Examiner for the assistance provided in the interview. In light of the clarifying amendments made to claims 7, 10 and 18, the Examiner's comments in conjunction with these claims made in paragraph 2 of the Office Action are obviated and therefore should be withdrawn.

The Summary of the Claims by the Examiner in paragraph 2 of the Office Action is acknowledged, however, Applicants do not feel that it is necessary and do not necessarily agree with the Examiner's choice of language in interpreting the claims. The claims are clear on their face and clearly set forth Applicants' invention. The Examiner's comments in no way limit, narrow or otherwise modify the scope of the claims or cause any subject matter to be surrendered.

The rejections reported in the Communication of August 12, 2002 have been carefully reviewed. Reconsideration of the rejections and allowance of all of Applicants' pending claims are respectfully requested in view of the following remarks.

112 Rejection

Claims 1-25 have been rejected under 35 U.S.C. §112, second paragraph because the recitation of "molecular weight" in claim 1 without further description rendered the claimed indefinite. This rejection is respectfully traversed.

The Examiner is directed to page 6, lines 9 through 15 where it is stated that the molecular weight of the polycarbonate polyols in grams per mole is obtained according to ASTM E 1899-97 Standard Test Method for Hydroxyl Groups Using Reactions with p-Toluenesulfonyl Isocyanate (TSI) and Potentiometric Titration with Tetrabutylammonium Hydroxide. A copy of the standard test method is attached.

In view of the above remarks, reconsideration and withdrawal of the rejection under 35 U.S.C. 112, second paragraph is respectfully requested.

103(a) Rejection

Claims 1-25 have been rejected under 35 U.S.C. 103(a) as being unpatentable over the PCT application W0 98/37115 in view of Ammons (U.S. Patent 4,103,070). This rejection is respectfully traversed.

PCT application W0 98/37115 is directed to an article comprising a substrate and a photochromic polyurethane coating exhibiting certain hardness (a Fischer microhardness of from 50 to 150 Newtons per mm²) and photochromic performance properties. As pointed out by the Examiner in paragraph 9 of the Office Action, there is no mention of the use of polycarbonate polyols as components of the photochromic polyurethane coating.

Ammons is directed to a safety glass laminate of a polyurethane formed from an organic diisocyanate, a compound containing at least two active hydrogens per molecule and having a

molecular weight below 250 and a special polycarbonate diol synthesized from a mixture of linear aliphatic and cycloaliphatic diols. In column 2, lines 18-23, it is stated that the polycarbonate urethanes disclosed herein have excellent weathering resistance and are hydrolytically stable

Applicants' invention is directed to an article comprising a substrate having an improved photochromic polyurethane coating that exhibits less than 25 percent swell in the Percent Swell Test. The photochromic polyurethane coating comprises: a polycarbonate polyol having a molecular weight of from 500 to 5000 grams per mole; an optional different organic polyol having a molecular weight of at least 500 grams per mole; an isocyanate; photochromic compounds; and optional catalyst. The components are used in such proportions to produce a coating that exhibits less than 25 percent swell.

Applicants developed the Percent Swell Test using isopropanol as the solvent to simulate cosmetic defects in photochromic polyurethane coated lenses to which a protective hardcoat was applied. As described on page 2, lines 23 through page 3, line 2, scratches that penetrate the hardcoat allow organic cleaning agents to migrate into the polyurethane layer and cause it to swell.

There is no reason, suggestion or motivation in PCT application W0 98/37115 and/or Ammons to have combined the references to produce Applicants' invention.

As previously mentioned, polycarbonate polyols are not disclosed in the primary reference PCT application W0 98/37115. The polycarbonate urethane of Ammons demonstrates weathering resistance and hydrolytic stability. There is no motivation or suggestion that the polycarbonate polyols would be useful to address the problem of organic solvent swelling of photochromic polyurethane coatings due to cosmetic defects. The secondary reference, Ammons, does not provide the deficiencies of the first.

"The mere fact that the prior art could be so modified would not have made the modification obvious unless the prior art suggested the desirability of the modification." (Quoting *In re*

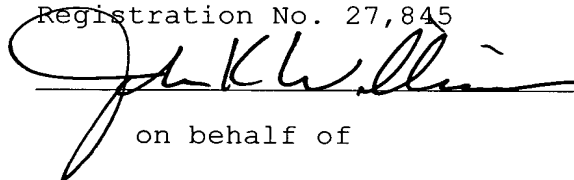
Gordon, 733 F.2d 900, 902, 221 USPQ 1125, 1127 (Fed. Cir. 1984)). The motivation to modify the prior art must flow from some teaching in the art that suggests the desirability or incentive to make the modification needed to arrive at the claimed invention. See *In re Napier*, 55 F.3d 610, 613, 34 U.S.P.Q.2d 1782, 1784 (Fed. Cir. 1995).

In view of the above remarks, reconsideration and withdrawal of the rejection under 35 U.S.C. 103(a) are respectfully requested. Allowance of all of Applicants' presenting pending claims is respectfully requested.

In the event that the Examiner finds that the foregoing amendments and remarks do not place this application in condition for immediate allowance, it is requested that the Examiner contact Applicants' agent at the telephone number found below to arrange for an interview to discuss the claims of the present application before the Examiner issues another Communication.

Respectfully submitted,

JOHN K. WILLIAMSON
Registration No. 27,845

A handwritten signature in dark ink, appearing to read "John K. Williamson", is written over a horizontal line.

on behalf of

FRANK P. MALLAK
Senior Patent Agent
Registration No. 36,590
Telephone No. (724) 325-5192
Facsimile No. (412) 434-4292

Pittsburgh, Pennsylvania
December 12, 2002

VERSION WITH MARKINGS TO SHOW CHANGES MADE

7. (Amended) The article of claim 6 wherein the polycarbonate polyol is represented by general formula I and is formed by the reaction of a bis(chloroformate) and an organic polyol.

10. (Amended) The article of claim 1 wherein the different organic polyol (b) is present and is selected from polyester polyols; polyether polyols, amide-containing polyols; polyacrylic polyols; epoxy polyols; polyhydric polyvinyl alcohols; urethane polyols and mixtures thereof.

18. (Amended) The article of claim 1 wherein the catalyst is present and is selected from 1,4-diazabicyclo[2.2.2]octane, dibutyl tin acetate, dibutyl tin dilaurate or mixtures thereof.